

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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TO: People interested in Great Lakes fisheries
FROM: Bill Horns, Great Lakes Fisheries Specialist

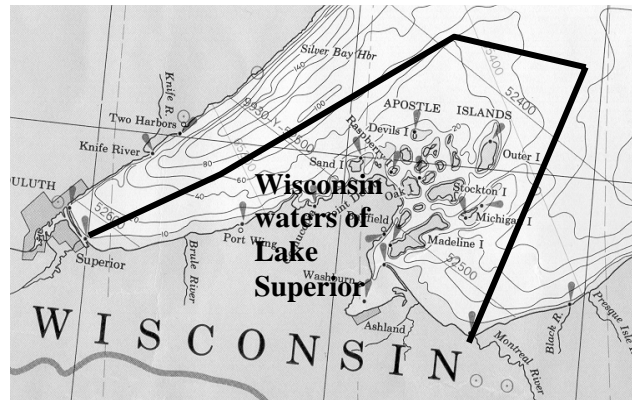
This is an update on some of the issues facing us on the Great Lakes. If you have questions or comments about the topics discussed here or any other issues related to Great Lakes fisheries, contact me by phone (608-266-8782), FAX (608-266-2244), or e-mail (hornsww@dnr.state.wi.us). We also maintain Lake Michigan and Lake Superior web pages:

Lake Michigan - <http://www.dnr.state.wi.us/org/water/fhp/fish/lakemich/index.htm>

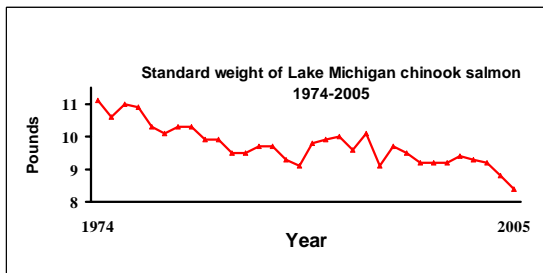
Lake Superior - <http://dnr.wi.gov/org/gmu/superior/Fish/Fish.html>

Light reading. The new edition of *Lake Michigan Management Reports* is available on our Lake Michigan web page. If you want a hard copy, sent me a note. This document includes creel survey reports, data from our spawning weirs, assessment reports on yellow perch and whitefish, a fish health report and other reports.

State/Tribal Lake Superior Agreement. The harvest of lake trout and other species from Wisconsin waters of Lake Superior (see figure) is governed by an agreement between the Department and the Bad River and Red Cliff Bands of Lake Superior Chippewa. The Department and the tribes recently concluded renegotiation of that management agreement to increase the allowable lake trout harvest by all fishers (state and tribal, sport and commercial) from 126,600 fish to 150,000 fish. This reflects optimism about the continuing restoration of native lake trout in Lake Superior.



Meanwhile, on Lake Michigan . . . An inter-jurisdictional committee has completed a draft Lake Trout Restoration Plan for Lake Michigan: 2005-2020. You can find a copy on our web page¹. Now the Lake Michigan Committee (representing the Departments of Natural Resources for the four states and the Chippewa Ottawa Resource Authority) will take it up and develop a final long-term restoration plan. Please let me know your comments on the draft. The restoration plan that emerges from the discussions will specify (among other things) lake trout strains to be used in future stocking, numbers of lake trout to be stocked, areas to receive stocked lake trout, size/age of lake trout to be stocked, and mortality rate limits to be achieved by the agencies. Lake trout used for restoration are produced and stocked by the US Fish and Wildlife Service subject to Lake Michigan Committee guidance. The Department will enter the Lake Michigan Committee discussions with the following interests in mind, in addition to restoring natural reproduction by lake trout: 1) maintain a sport fishery for lean lake trout, 2) maintain our multi-species salmon and trout sport fishery, 3) maintain a multi-species forage base, and 4) maintain a viable multi-species commercial fishery.



since we started measuring that in 1974, having dropped from over 11 pounds in 1974 to less than 8.5 pounds in 2005. Prompted by declining chinook salmon growth rates the states will cut chinook salmon stocking in Lake Michigan by 25% in 2006. Fortunately, alewife fortunes may be looking up. The lake-wide acoustic forage survey conducted by the USGS

Stocking cuts and more alewives – just in time. Salmon growth rates reached new lows in 2005 (see figure). The “standard weight”² of chinook salmon returning to Strawberry Creek in 2005 was the lowest

¹ <http://www.dnr.state.wi.us/org/water/fhp/fish/lakemich/A%20Restoration%20Plan%20for%20Lake%20Trout.pdf>

² Standard weight is the average weight of a 30-inch fish.

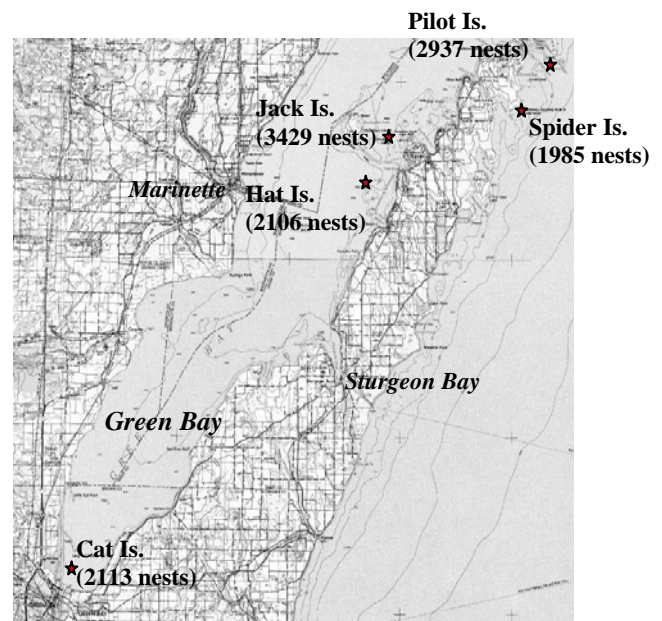
indicated the highest density of young-of-year alewives since 1995. I can send you a copy of that report, or you can find it at on the USGS web page³. We hope that with fewer salmon stocked in the lake and more alewives on the way we will see an increase in this index of growth.

Marking all chinooks. A wild card in this, of course, is the number of naturally-reproduced chinook salmon. To provide a basis for estimating that number, In 2006 Michigan and Wisconsin will mark all stocked chinooks with oxytetracycline (OTC). OTC is administered in the feed of fingerling chinooks during the weeks just prior to stocking.

Yellow perch seem to be rebounding. In the early 1980's the recovery of yellow perch was marked by strong natural reproduction first in Green Bay, and a couple of years later in southern Lake Michigan. That pattern seems to be repeating itself. The remarkable 2003 year class of yellow perch in Green Bay started showing up in sport and commercial catches last year. With good natural reproduction in 2002, 2003, and 2004 we are hoping for continued increases in adult abundance. We've already made some adjustments to the regulations by increasing the sport fishing daily bag limit from 10 to 15 and increasing the total allowable commercial harvest from 20,000 to 60,000 pounds. The 2005 southern Lake Michigan year class appears to be strong, showing up in lake-wide USGS forage surveys, in our young-of-year beach seining (see page 17 in our Lake Michigan Management Reports), and now (according to Illinois anglers) in a few coho salmon stomachs. It's too early to change harvest limits, because one good year class is just not enough to restore the fishery, but we are entitled to hope for a recovery in Lake Michigan.

Cormorant research . . . Researchers have concluded that the total weight of yellow perch consumed by cormorants (adults and chicks) from the Cat Island colony in 2004 and 2005 was nearly 400,000 pounds, and that the birds from that colony probably ate over 2,000,000 pounds of all species of fish during those two years. These estimates do not include fish consumed by non-nesting cormorants in the area. Most of the yellow perch eaten by cormorants had been spawned in 2003 and were eaten as yearlings in 2004 or as 2-year-olds in 2005. During those same years sport and commercial fishers harvested about 130,000 pounds of yellow perch from Green Bay. For the most part those were larger and older than the yellow perch taken by cormorants. The research will continue in 2006. We will be interested in seeing whether cormorants continue to consume substantial numbers of fish from the 2003 yellow perch year class. In 2005 yellow perch from the 2003 year class contributed significantly to the sport fishery, so it is possible that despite the substantial predation by cormorants on yellow perch the perch population of Green Bay is capable of recovery. This research does not address predation by cormorants from more northerly colonies (Pilot Island, Spider Island, Jack Island, Hat Island). Because the foraging range of nesting birds is limited, we do not believe that those colonies can strongly effect the Green Bay yellow perch population, which is concentrated in the southern end of Green Bay. However, the combined cormorant population in Wisconsin waters of Green Bay, consisting of over 12,000 nesting pairs in 2005 (see map), consumes several million pounds of fish annually, and questions remain about the affects of that on other fish populations and on stocked fish.

. . . and control. For 2006 the Department has endorsed a control program to be carried out by USDA Wildlife Services. The control program will involve oiling up to 6,000 nests on Cat Island and other islands and shooting up to 300 adult birds on Little Strawberry Island (this is a new colony near Jack Island). Egg oiling involves spraying vegetable oil on the eggs. This prevents hatching but does not discourage the nesting behavior of the mother or induce her to lay more eggs. Because fish consumption by chicks can account for up to 1/3 of the total amount consumed by a colony, egg oiling can substantially reduce the impact of cormorants on fish populations. In addition, up to 500 adults birds will be shot as part of the third year of the diet study at Cat Island and 100 chicks will be removed for other research purposes. The Department, in cooperation with the USFWS, USDA Wildlife Services, and UW scientists will assess the impact of the egg oiling program on the cormorant population and will continue to seek answers to questions about the consequences of this control program for fish populations and for other bird species nesting on these islands.



³ <http://www.glsc.usgs.gov/files/reports/2005LakeMichiganReport.pdf>